

(Pakistan); *rotundum* Nurse, 1904 (India); *selectum* Nurse, 1902 (Pakistan); *wroughtoni* Buysson, 1896 (India). Thanks to the cooperation of several institutions and individuals I was able to study all the types (a paralectotype for *H. perversum*) of the above Oriental species, except the wide spread and well known *H. ardens* and *H. monochroum*, (and of the supposed *Hedychridium tayabicum* Cockerell, 1927 from Philippines, which was transferred to the genus *Hedychrum* (Strumia 1994)), and to make a complete regional revision of this genus, with redescription of old species and description of new species from India and Sri Lanka. In addition a new reliable key for the presently valid 14 species is given. Half of the *Hedychridium* species from India are presently known only from the female or from the male only. Fortunately sexual dimorphism is low in this genus, but this unsatisfactory situation must be considered using the key. Four new species are described and three new synonymies are proposed. The new findings do not modify the eastward limit of the genus *Hedychridium*, which is west Thailand. Of the 14 known species three are Palearctic (*H. amatum*, *H. modestum* and *H. disiunctum*, while the actual presence of *H. ardens* in India needs confirmation) with eastward limit of west Pakistan, four species (two endemic) are known from Sri Lanka and one species, *H. monochroum*, shows a very broad distribution from Portugal up to west Thailand.

Tavares, Marcelo Teixeira (Ciencias Exatas e Naturais, Centro Universitario de Araraquara, Araraquara, SP, Brazil).

Revision of Brachymeriini (Hymenoptera: Chalcididae) from Americas south of the United States.

Based on a morphological study of the species of the monotypic tribe Brachymeriini from the Americas south of the United States, 7 groups of species were outlined. These groups are compared with the current classification and some taxonomic changes are proposed. A new genus is proposed to contain a monophyletic group of New World species. Two subgenera are raised to generic rank and another synonymised. The remaining species are treated as belonging to *Brachymeria* and four species groups are recognized. These last species seem to be related to extra-limital species and no changes are proposed. Fifty seven species were considered in this study, of which forty one were found to be valid and belonging to the tribe, and four considered as "inquirendae". A number of new synonymies are proposed. Also, some of the earlier established synonyms are reversed and two new combinations proposed. Identification keys, illustrations, synonymies and distributions are presented to described species.

Ubaidillah, Rosichon, John LaSalle and Donald L.J. Quicke (Unit of Parasitoid Systematics, CABI Bioscience UK Centre (Ascot), Department of Biology, Imperial College at Silwood Park, Ascot, Berkshire, UK).

Phylogenetic studies of Cirrospilini (Eulophidae: Eulophinae).

The Cirrospilini has recently been proposed to represent one of the two tribes in a monophyletic Eulophinae based on molecular and morphological evidence. The tribe presently contains 17 genera and about 250 species which are mainly ectoparasitoids on Diptera, Lepidoptera and Coleoptera in concealed situations: Some species may act as hyperparasitoids, and a few species are gall formers. There are no hypotheses of relationships among genera, and there has never been a comprehensive generic treatment. The

senior author is beginning a phylogenetic study of this tribe. Preliminary indications are that about 100 characters will be used dealing mainly with external morphology, but also including internal morphology, genitalia structure, and biology. Primary goals of this study are to confirm the monophyly of the Cirrospilini and estimate the relationships among genera. End products will be a generic classification based on the phylogenetic analysis, a generic key, and for each genus a synopsis, description or redescription, illustrations, host and distributional information, and a list of included species. The hypothesis of relationships will be combined with molecular data and used in larger studies of relationships within the subfamily and family.

Williams, III, Livy (Southern Insect Management Research Unit, United States Department of Agriculture, Agricultural Research Service, Stoneville, Mississippi, USA).

Biological control of cotton insect pests in the Mississippi Delta.

In 1998 a biological control research program for cotton insect pests was initiated at the Southern Insect Management Research Unit. Current efforts are focused on enhancing the impact of indigenous natural enemies of the tarnished plant bug (*Lygus lineolaris*), cotton bollworm (*Helicoverpa zea*), and tobacco budworm (*Heliothis virescens*). The goal of the program is to provide the knowledge necessary to develop biologically-based cotton pest control strategies in the Mississippi River Delta. This poster presents preliminary results from 1998.

Williams, III, Livy¹ and ²Timothy E. Martinson (¹Southern Insect Management Research Unit, United States Department of Agriculture, Agricultural Research Service, Stoneville, Mississippi, USA; ²Cornell University, Finger Lakes Grape Program, Cornell Cooperative Extension, Penn Yan, New York, USA).

Colonization of New York vineyards by *Anagrus* spp. (Hymenoptera: Mymaridae): Overwintering biology, within-vineyard distribution of wasps, and parasitism of grape leafhopper eggs.

A study was conducted in New York to identify the host plants in which *Anagrus* spp. overwinter, and to characterize the dispersal of wasps, and parasitism of grape leafhopper eggs in vineyards. Results indicated that *Anagrus* can utilize alternate hosts in several plant species, and that diapausing insect eggs in *Acer saccharum* in particular may play an important role in the overwintering biology of *Anagrus*. Following emergence from overwintering hosts *Anagrus* adults are aggregated at the vineyard edge early in the season (May and June). By mid-season or later (August and September) the pattern of wasp colonization and parasitism indicates that they are more widely dispersed in the vineyards. This pattern is consistent with colonization from vineyard edges, followed by relatively slow dispersal into the vineyard interior. Further investigations are necessary to identify the alternate host(s) that *Anagrus* exploits during the winter and spring, and to delineate the phenology of alternate hosts, grape leafhoppers, and *Anagrus* in the spring. Habitat management studies could then be conducted to identify strategies that accelerate population growth of *Anagrus* in the spring and increase the rate of dispersal into vineyards.